## 09/744794 Rece PCT/PTO 22 APR 2002

## SEQUENCE LISTING

<110> INYCTE PHARMACEUTICALS, INC. HILLMAN, Jennifer L. LAL, Preeti TANG, Y. Tom CORLEY, Neil C. GUEGLER, Karl J. BAUGHN, Mariah R. PATTERSON, Chandua BANDMAN, Olga AU-YOUNG, Janice GORGGNE, Gina A. YUE, Henry AZIMZAI, Yalda REDDY Roopa LU, Dyung Aina M. SHIH, Leo L. <120> PHOSPHORYLATION EFFECTORS <130> PF-0565 PCT <140> To Be Assigned <141> Herewith <150> 09/125,494; unassituta, 09/152,814; u.ssigned; 09/173,482; unassigned; 60/106, 889; 60/109, 093; 60/113, 796; <151> 1998-07-28; 1998-07-28; 1998-09-14; 1998-09-14, 1998-10-14; 1998-10-14;1998-11-03; 1998-11-19; 1998-12-22 <160> 61 <170> PERL Program <210> 1 <211> 300 <112> PRT <213> Homo sapiens <220> <221> misc\_feature <223> Incyte Clone Number: 132240 <400> 1 Met Glu Ser Pro Leu Glu Ser Gln Pro Leu Aso Ser Asp Arg Ser 5 10 1 Ile Lys Glu Ser Ser Phe Glu Glu Ser Asn Ile Glu Asp Pro Leu 3.0 20 25 Ile Val Thr Pro Asp Cys Gln Glu Lys Thr Ser Pro Lys Gly Val 35 40 Glu Asn Pro Ala Val Gln Glu Ser Asn Gln Lys Met Leu Gly Pro 50 55 Pro Leu Glu Val Leu Lys Thr Leu Ala Ser Lys Arg Asn Ala Val 65 70

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Ala Phe Arg Ser Phe Asn Ser His Ile Asn Ala Ser Asn Asn Ser
                8.0
                                    8.5
Glu Pro Ser Arg Met Asn Met Thr Ser Leu Asp Ala Met Asp Ile
                95
                                    100
Ser Cys Ala Tyr Ser Gly Ser Tyr Pro Met Ala Ile Thr Pro Thr
               110
                                   1.1.5
Gln Lys Arg Arg Ser Cys Met Pro His Gln Thr Pro Asn Gln Ile
                125
                                    130
Lys Ser Gly Thr Pro Tyr Arg Thr Pro Lys Ser Val Arg Arg Gly
Val Ala Pro Val Asp Asp Gly Arg Ile Leu Gly Thr Pro Asp Tyr
                155
                                    160
Leu Ala Pro Glu Leu Leu Gly Arg Ala His Gly Pro Ala Val
                170
                                    175
Asp Trp Trp Ala Leu Gly Val Cys Leu Phe Glu Phe Leu Thr Gly
                                    190
                185
Ile Pro Pro Phe Asn Asp Glu Thr Pro 3ln Gln Val Phe Gln Asn
                200
                                     205
                                                         210
Ile Leu Lys Arg Asp Ile Pro Trp Pro Glu Gly Glu Glu Lys Leu
                215
                                    220
Ser Asp Asn Ala Gln Ser Ala Val Glu Ile Leu Leu Thr Ile Asp
                                    235
                230
Asp Thr Lys Arg Ala Gly Met Lys Glu Leu Lys Arg His Pro Leu
                                    250
Phe Ser Asp Val Asp Trp Glu Asn Leu Cln His Gln Thr Met Pro
                260
                                    265
                                                         270
Phe Ile Pro Gln Pro Asp Asp Clu Thr Asp Thr Ser Tyr Phe Glu
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                                    230
Ala Arg Asn Thr Ala Gln His Leu Thr Val Ser Gly Phe Ser Leu
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                                    295
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Asp Phe Ile Gln Glu Leu Leu Ala Lys Leu Gln Gly Leu His Arg
                    115
               110
Gln Pro Gly Leu Arg Gln Pro Ser Pro Ser His Asp Gly Ser Leu
               125
                                  130
Ser Pro Leu Gln Asp Arg Ala Arg Thr Ala His Pro
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Leu Lys Ala Asp Fro Glu Glu Leu Phe Thr Lys Leu Glu Lys Ile
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                                     25
Gly Lys Gly Ser Phe Gly Glu Val Phe Lys Gly Ile Asp Asn Arg
                                    40
                 3.5
Thr Gln Lys Val Val Ala Ile Lys Ile Ile Asp Leu Glu Glu Ala
                 50
                                     55
Glu Asp Glu Ile Glu Asp Ile Gln Glu Ile Thr Val Leu Ser
                 65
Gln Cys Asp Ser Pro Tyr Val Thr Lys Tyr Tyr Gly Ser Tyr Leu
                80
                                    85
Lys Asp Thr Lys Leu Trp Ile Ile Met Glu Tyr Leu Gly Gly Gly
                95
                                   100
Ser Ala Leu Asp Leu Leu Glu Pro Gly Arg Leu Asp Glu Thr Gln
                                   115
               110
Ile Ala Thr Ile Leu Arg Glu Ile Leu Lys Gly Leu Asp Tyr Leu
               125
                                   130
His Ser Glu Lys Lys Ile His Arg Asp Ile Lys Ala Ala Asn Val
                                   145
               140
Leu Leu Ser Glu His Gly Glu Val Lys Leu Ala Asp Phe Gly Val
               155
                                   160
Ala Gly Gln Leu Thr Asp Thr Gln Ile Lys Arg Asn Thr Phe Val
                170
                                    175
Gly Thr Pro Phe Trp Met Ala Pro Glu Val Ile Lys Gln Ser Ala
                                    190
                185
Tyr Asp Ser Lys Ala Asp Ile Trp Ser Leu Gly Ile Thr Ala Ile
                200
Glu Leu Ala Arg Gly Glu Pro Pro His Ser Glu Leu His Pro Met
                                                        325
                215
                                    220
Lys Val Leu Phe Leu Ile Pro Lys Asn Asn Pro Pro Thr Leu Glu
                230
                                   235
Gly Asn Tyr Ser Lys Pro Leu Lys Glu Phe Val Glu Ala Cys Leu
                                    250
                245
Asn Lys Glu Pro Ser Phe Arg Pro Thr Ala Lys Glu Leu Leu Lys
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275

255

280

His Lys Phe Ile Leu Arg Asn Ala Lys Lys Thr Ser Tyr Leu Thr

270

285

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Glu Leu Ile Asp Arg Tyr Lys Arg Trp Lys Ala Glu Gln Ser His
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                290
Asp Asp Ser Ser Ser Glu Asp Ser Asp Ala Glu Thr Asp Gly Gln
                                    310
                305
Ala Ser Gly Gly Ser Asp Ser Gly Asp Trp Ile Phe Thr Ile Arg
                                    325
Glu Lys Asp Pro Lys Asn Leu Glu Asn Gly Ala Leu Gln Pro Ser
                                    340
                335
Asp Leu Asp Arg Asn Lys Met Lys Asp Ile Pro Lys Arg Pro Phe
                350
                                    355
Ser Gln Cys Leu Ser Thr Ile Ile Ser Pro Leu Phe Ala Glu Leu
                365
                                    370
                                                         375
Lys Glu Lys Ser Gln Ala Cys Gly Gly Asn Leu Gly Ser Ile Glu
                330
                                    385
Glu Leu Arg Gly Ala Ile Tyr Leu Ala Glu Glu Ala Cys Pro Gly
                395
                                    400
                                                         41)5
Ile Ser Asp Thr Met Val Ala Gln Leu Val Gln Arg Leu Gln Arg
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Tyr Ser Leu Ser Gly Gly Gly Thr Ser Ser His
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Gly Leu Arg Asp Val Gln Pro Tyr Leu Tyr Lys Ile Ser Phe Gln
               185
                                190
Ile Thr Asp Ala Leu Gly Thr Ser Val Thr Thr Thr Met Arg Arg
                200
                                    205
Leu Ile Lys Asp Thr Leu Ala Leu
                315
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Ser Val Pro Arg Thr Glu Thr Ile Glu Glu Ser Leu Ala Glu Phe
                 20
                                     25
Thr Glu Gln Phe Asn Gln Leu His Asn Arg Arg Asn Glu Asn Leu
                 3, 5,
                                     40
Gln Leu Gly Pro Leu Gly Arg Asp Pro Pro Gln Glu Cys Ser Thr
                                     55
Phe Ser Pro Thr Asp Ser Gly Glu Pro Gly Gln Leu Ser Pro
                 65
                                     70
Gly Val Gln Phe Gln Arg Arg Gln Asn Gln Arg Arg Phe Ser Met
                                     35
Glu Asp Val Ser Lys Arg Leu Ser Leu Pro Met Asp Ile Arg Leu
                 95
                                    100
Pro Gln Glu Phe Leu Gln Lys Leu Gln Met Glu Ser Pro Asp Leu
                110
                                    115
Pro Lys Pro Leu Ser Arg Met Ser Arg Arg Ala Ser Leu Ser Asp
                125
                                    130
Ile Gly Phe Gly Lys Leu Glu Thr Tyr Val Lys Leu Asp Lys Leu
                140
                                    145
Gly Glu Gly Thr Tyr Ala Thr Val Phe Lys Gly Arg Ser Lys Leu
                155
                                    150
Thr Glu Asn Leu Val Ala Leu Lys Glu Ile Arg Leu Glu His Glu
                170
                                    175
Glu Gly Ala Pro Cys Thr Ala Ile Arg Glu Val Ser Leu Leu Lys
                135
                                    190
Asn Leu Lys His Ala Asn Ile Val Thr Leu His Asp Leu Ile His
                                    205
                200
Thr Asp Arg Ser Leu Thr Leu Val Phe Glu Tyr Leu Asp Ser Asp
                215
                                    220
Leu Lys Gln Tyr Leu Asp His Cys Gly Asn Leu Met Ser Met His
                230
                                    235
                                                         240
Asn Val Lys Ile Phe Met Phe Gln Leu Leu Arg Gly Leu Ala Tyr
                                    2:50
                245
Cys His His Arg Lys Ile Leu His Arg Asp Leu Lys Pro Gln Asn
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275

2:55

230

285

Leu Leu Ile Asn Glu Arg Gly Glu Leu Lys Leu Ala Asp Phe Gly

<210> 6 <211> 540

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Leu Ala Arg Ala Lys Ser Val Pro Thr Lys Thr Tyr Ser Asn Glu
                290
                                   295
Val Val Thr Leu Trp Tyr Arg Pro Pro Asp Val Leu Leu Gly Ser
                305
                                    310
Thr Glu Tyr Ser Thr Pro Ile Asp Met Trp Gly Val Gly Cys Ile
                                    3.25
                320
His Tyr Glu Met Ala Thr Gly Arg Pro Leu Phe Pro Gly Ser Thr
                                    340
                335
Val Lys Glu Glu Leu His Leu Ile Phe Arg Leu Leu Gly Thr Pro
                                    355
Thr Glu Glu Thr Trp Pro Gly Val Thr Ala Phe Ser Glu Phe Arg
                                    370
                                                         375
                365
Thr Tyr Ser Phe Pro Cys Tyr Leu Pro Gln Pro Leu Ile Asn His
                380
                                    385
Ala Pro Arg Leu Asp Thr Asp Gly Ile His Leu Leu Ser Ser Leu
                395
                                    400
Leu Leu Tyr Glu Ser Lys Ser Arg Met Ser Ala Glu Ala Ala Leu
                41.0
                                    415
Ser His Ser Tyr Phe Arg Ser Leu Gly Glu Arg Val His Gln Leu
                425
                                    430
Glu Asp Thr Ala Ser Ile Phe Ser Leu Lys Glu Ile Gln Leu Gln
                440
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Lys Asp Pro Gly Tyr Arg Gly Leu Ala Phe Gln Gln Pro Gly Arg
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Gly Lys Asn Arg Arg Gln Ser Ile Phe
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                                     25
Thr Val Ser Ser Ala Arg His Ala Asp Trp Arg Val Gln Val Ala
                                     40
                 35
Val Lys His Leu His Ile His Thr Pro Leu Leu Asp Ser Glu Arg
Lys Asp Val Leu Arg Glu Ala Glu Ile Leu His Lys Ala Arg Phe
                 55
                                     7.0
Ser Tyr Ile Leu Pro Ile Leu Gly Ile Cys Asn Glu Pro Glu Phe
                 30
                                     3.5
Leu Gly Ile Val Thr Glu Tyr Met Pro Asn Gly Ser Leu Asn Glu
                 -, c,
                                    1:00
Leu Leu His Arg Lys Thr Glu Tyr Pro Asp Val Ala Trp Pro Leu
                110
                                    115
Arg Phe Arg Ile Leu His Glu Ile Ala Leu Gly Val Asn Tyr Leu
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				125					130					135
His	Asn	Met	Thr	Pro 140	Pro	Leu	Leu	His	H1S	Asp	Leu	Lys	Thr	Gln 150
Asn	Ile	Leu	Leu	Asp 155	Asn	Glu	Phe	His	Val 150	Lys	Ile	Ala	Asp	Phe 165
Gly	Leu	Ser	Lys	Trp 170	Arg	Met	Met	Ser	Leu 175	Ser	Gln	Ser	Arg	Ser 180
Ser	Lys	Ser	Ala	Pro 135	Glu	Gly	Gly	Thr	Ile 190	Ile	Tyr	Met	Pro	Pro 195
Glu	Asn	Tyr	Glu	Pro 200	Gly	Gln	Lys	Ser	Arg 205	Ala	Ser	Ile	Lys	His 210
Asp	Ile	Tyr	Ser	Tyr 215	Ala	Val	Ile	Thr	Trp	Glu	Val	Leu	Ser	Ang 225
Lys	Gln	Pro	Phe		Asp	Val	Thr	Asn		Leu	Gln	Ile	Met	Tyr 240
Ser	Val	Ser	Gln		His	Arg	Pro	Val	Ile 250	Asn	Glu	Glu	Ser	Leu 255
Pro	Tyr	Asp	Ile	Pro 260	His	Arg	Ala	Arg	Mat 365	Ile	Ser	Leu	Ile	Glu 270
Ser	Gly	Trp	Ala	Gln 275	Asn	Pro	Asp	Glu	Arg 280	Pro	Ser	Phe	Leu	Lys 285
Cys	Leu	Ile	Glu	Leu 290	Gīu	Pro	Val	Leu	Arg 295	Thr	Phe	Glu	Glu	Ile 300
Thr	Phe	Leu	Glu	Ala 305	Val	Ile	Gln	Leu	Lys 310	Lys	Thr	Lys	Leu	Gln 315
Ser	Val	Ser	Ser	Ala 330	Ile	His	Leu	Cys	Asp	Lys	Lys	Lys	Met	Glu 330
Leu	Ser	Leu	Asn	Ile 335	Pro	Val	I.sn	His	GLy 340	Pro	Gln	Glu	Glu	Ser 345
Cys	Gly	Ser	Ser	Gln 350	Leu	His	Glu	Asn	Ser 355	Gly	Ser	Pro	Giu	Thr 360
Ser	Arg	Ser	Leu	Pro 365	Ala	Pro	Gln	Asp	Asn 370	Asp	Phe	Leu	Ser	Arg 375
Lys	Ala	Gln	Asp	Cys 380	Tyr	Phe	Met	Lys	Leu 385	His	His	Суѕ	Pro	Gly 390
Asn	His	Ser	Trp	Asp 395	Ser	Thr	Ile	Ser	Gly 400	Ser	Gln	Arg	Ala	Ala 405
Phe	Cys	Asp	His	Lys 410	Thr	Thr	Pro	Cys	Ser 415	Ser	Ala	Ile	Ile	Asn 420
Pro	Leu	Ser	Thr	Ala 425	Gly	Asn	Ser	Glu	Arg 430	Leu	Gln	Pro	Gly	Ile 435
Ala	Gln	Gln	Trp	Ile 440	Gln	Ser	Lys	Arg	Glu 445	Asp	Ile	Väl	Asn	Gln 450
Met	Thr	Glu	Ala	Суs 455	Leu	Asn	Gln	Ser	Leu 460	Asp	Ala	Leu	Leu	Ser 465
Arg	Asp	Leu	Ile	Met 470	Lys	Glu	Asp	Tyr	Glu 475	Leu	Val	Ser	Thr	Lys 430
Pro	Thr	Arg	Thr	Ser 435	Lys	Val	Arg	Gln	Leu 490	Leu	Asp	Thr	Thr	Asp 495
Ile	Gln	Gly	Glu		Phe	Ala	Lys	Val		Val	Gln	L'/S	Leu	
Asp	Asn	Lys	Gln		Gly	Leu	Gln	Pro		Pro	Glu	Ile	Leu	
Val	Ser	Arg	Ser		Ser	Leu	Asn	Leu		Gln	Asn	Lys	Ser	

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                 20
Glu Met Asp Pro Pro Ala Leu Pro Pro Lys Pro Pro Lys Pro Thr
                                      40
                 35
Thr Val Ala Asn Asn Gly Met Asn Asn Met Ser Leu Gln Asp
                 50
                                      5.5
Ala Glu Trp Tyr Trp Gly Asp Ile Ser Arg Glu Glu Val Asn Glu
                 65
                                      70
Lys Leu Arg Asp Thr Ala Asp Gly Thr Phe Leu Val Arg Asp Ala
                                      85
                 80
Ser Thr Lys Met His Gly Asp Tyr Thr Leu Thr Leu Arg Lys Gly
                                     100
Gly Asn Asn Lys Leu Ile Lys Ile Phe His Arg Asp Gly Lys Tyr
                                                         120
                110
                                     1.15
Gly Phe Ser Asp Pro Leu Thr Phe Ser Ser Val Val Glu Leu Iie
                125
                                     130
Asn His Tyr Arg Asn Glu Ser Leu Ala Gln Tyr Asn Pro Lys Leu
                140
                                     145
Asp Val Lys Leu Leu Tyr Pro Val Ser Lys Tyr Gln Gln Asp Gln
                155
                                     160
Val Val Lys Glu Asp Asn Ile Glu Ala Val Gly Lys Lys Leu His
                170
                                     175
Glu Tyr Asn Thr Gln Phe Gln Glu Lys Ser Arg Glu Tyr Asp Arg
                135
                                     190
                                                         195
Leu Tyr Glu Glu Tyr Thr Arg Thr Ser Gln Glu Ile Gln Met Lys
                200
                                     205
Arg Thr Ala Ile Glu Ala Phe Asn Glu Thr Ile Lys Ile Phe Glu
                                     220
                                                         225
                215
Glu Gln Cys Gln Thr Gln Glu Arg Tyr Ser Lys Glu Tyr Ile Glu
                                     235
Lys Phe Lys Arg Glu Gly Asn Glu Lys Glu Ile Gln Arg Ile Met
                                     250
                245
His Asn Tyr Asp Lys Leu Lys Ser Arg Ile Ser Glu Ile Ile Asp
                                                         270
                250
Ser Arg Arg Leu Glu Glu Asp Leu Lys Lys Gln Ala Ala Glu
                275
                                                         285
                                     230
Tyr Arg Glu Ile Asp Lys Arg Met Asn Ser Ile Lys Pro Asp Leu
                290
                                     295
Ile Gln Leu Arg Lys Thr Arg Asp Gln Tyr Leu Met Trp Leu Thr
                305
                                     310
Gln Lys Gly Val Arg Gln Lys Lys Leu Asn Glu Trp Leu Gly Asn
                320
                                     325
                                                         330
Glu Asn Thr Glu Asp Gln Tyr Ser Leu Val Glu Asp Asp Glu Asp
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Leu Pro His His Asp Glu Lys Thr Trp Asn Val Gly Ser Ser Asn 350 355 Arg Asn Lys Ala Glu Asn Leu Leu Arg Gly Lys Arg Asp Gly Thr 355 370 Phe Leu Val Arg Glu Ser Ser Lys Gln Gly Cys Tyr Ala Cys Ser 330 385 Val Val Val Asp Gly Glu Val Lys His Cys Val Ile Asn Lys Thr 375 400 Ala Thr Gly Tyr Gly Phe Ala Glu Pro Tyr Asn Leu Tyr Ser Ser 410 415 Leu Lys Glu Leu Val Leu His Tyr Gln His Thr Ser Leu Val Gln 425 430 435 His Asn Asp Ser Leu Asn Val Thr Leu Alæ Tyr Pro Val Tyr Ala 4.45 Gln Gln Arg Arg

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220
                                                         225
                215
Lys Met Pro Asp Val Glu Leu Phe Val Asn Leu Gly Asp Trp Pro
                230
                                    235
Leu Glu Lys Lys Lys Ser Asn Ser Asn Ile His Pro Ile Phe Ser
                                    250
                                                         255
                2.15
Trp Cys Gly Ser Thr Asp Ser Lys Asp Ile Val Met Pro Thr Tyr
                250
                                     265
Asp Leu Thr Asp Ser Val Leu Glu Thr Met Gly Arg Val Ser Leu
                275
                                                         285
                                     230
Asp Met Met Ser Val Gln Ala Asn Thr Gly Pro Pro Trp Glu Ser
                                                         300
                190
                                     295
Lys Asn Ser Thr Ala Val Trp Arg Gly Arg Asp Ser Arg Lys Glu
                305
                                     310
                                                         315
Arg Leu Glu Leu Val Lys Leu Ser Arg Lys His Pro Glu Leu Ile
                320
                                     325
Asp Ala Ala Phe Thr Asn Phe Phe Phe Lys His Asp Glu Asn
                335
                                     3.10
Leu Tyr Gly Pro Ile Val Lys His Ile Ser Phe Phe Asp Phe Phe
                350
                                     355
Lys His Lys Tyr Gin Ile Asn Ile Asp Gly Thr Val Ala Ala Tyr
                365
                                    370
                                                         375
Arg Leu Pro Tyr Leu Leu Val Gly Asp Ser Val Val Leu Lys Gln
                380
                                    335
Asp Ser Ile Tyr Tyr Glu His Phe Tyr Asn Glu Leu Gln Pro Trp
                395
                                     400
Lys His Tyr Ile Pro Val Lys Ser Asn Leu Ser Asp Leu Leu Glu
                410
                                     415
                                                         420
Lys Leu Lys Trp Ala Lys Asp Fis Asp Glu Glu Ala Lys Lys Ile
                425
                                    430
                                                         435
Ala Lys Ala Gly Gln Glu Phe Ala Arg Asn Asn Leu Met Gly Asp
                440
                                    445
                                                         450
Asp Ile Phe Cys Tyr Tyr Phe Lys Leu Phe Gln Glu Tyr Ala Asn
                455
                                    460
Leu Gln Val Ser Glu Pro Gln Ile Arg Glu Gly Met Lys Arg Val
                470
                                    475
                                                         430
Glu Pro Gln Thr Glu Asp Asp Leu Phe Pro Cys Thr Cys His Arg
                435
                                    490
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Lys Lys Thr Lys Asp Glu Leu
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Lys Ala Gly Ala Tyr Asp Phe Pro Ser Pro Glu Trp Asp Thr Val
                 35,
                                     40
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Thr Pro Glu Ala Lys Asp Leu Ile Asn Lys Met Leu Thr Ile Asn 55 5.0 Pro Ala Lys Arg Ile Thr Ala Ser Glu Ala Leu Lys His Pro Trp 65 7.0 Ile Cys Gln Arg Ser Thr Val Ala Ser Met Met His Arg Gln Glu 30 35 Thr Val Asp Cys Leu Lys Lys Phe Asn Ala Arg Arg Lys Leu Lys 95 100 Gly Ala Ile Leu Thr Thr Met Leu Ala Thr Arg Asn Phe Ser Ala 110 115 Ala Lys Ser Leu Leu Lys Lys Pro Asp Gly Vai Lys Glu Ser Thr 135 125 130 Glu Ser Ser Asn Thr Thr Ile Glu Asp Glu Asp Val Lys Ala Arg 140 1.15 Lys Gln Glu Ile Ile Lys Val Thr Glu Cln Leu Ile Glu Ala Ile 155 150 Asn Asn Gly Asp Phe Glu Ala Tyr Thr Lys Ile Cys Asp Pro Gly 170 175 130 Leu Thr Ala Phe Glu Pro Glu Ala Leu Gly Asn Leu Val Glu Gly 185 190 Met Asp Phe His Arg Phe Tyr Fhe Glu Asn Ala Leu Ser Lys Ser 200 205 210 Asn Lys Pro Ile His Thr Ile Ile Leu Asn Pro His Val His Leu 215 220 225 Val Gly Asp Asp Ala Ala Cys Ile Ala Tyr Ile Arg Leu Thr Gln 235 230 Tyr Met Asp Gly Set Gly Met Pro Lys Thr Met Gln Ser Glu Glu 245 250 Thr Arg Val Trp His Arg Arg Asp Gly Lys Trp Gln Asn Val His 260 265 Phe His Arg Ser Gly Ser Pro Thr Val Pro Ile Asn 275

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<211> 510

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Leu Met Gln Lys Ile Lys Gln Gln Lys Gly Lys Leu Phe Pro Glu Asp Met Ile Leu Asn Trp Phe Thr Gln Met Cys Leu Gly Val Asn His Ile His Lys Lys Arg Val Leu His Arg Asp Ile Lys Ser Lys 10.5 Asn Ile Phe Leu Thr Gln Asn Gly Lys Val Lys Leu Gly Asp Phe Gly Ser Ala Arg Leu Leu Ser Asn Pro Met Ala Phe Ala Cys Thr Tyr Val Gly Thr Pro Tyr Tyr Val Pro Pro Glu Ile Trp Glu Asn Leu Pro Tyr Asn Asn Lys Ser Asp Ile Trp Ser Leu Gly Cys Ile Leu Tyr Glv Leu Cys Thr Leu Lys His Pro Phe Gln Ala Asn Ser Trp Lys Asn Leu Ile Leu Lys Val Cys Gln Gly Cys Ile Ser Pro Leu Pro Ser His Tyr Ser Tyr Glu Leu Gln Phe Leu Val Lys Gln 0.30 Met Phe Lys Arg Asn Pro Ser His Arg Pro Ser Ala Thr Thr Leu Leu Ser Arg Gly Ile Val Ala Arg Leu Val Gln Lys Cys Leu Pro Pro Glu Ile Ile Met Glu Tyr Gly Glu Glu Val Leu Glu Glu Ile Lys Asn Ser Lys His Asn Thr Fro Arg Lys Lys Thr Asn Pro Ser Arg Ile Arg Ile Ala Leu Gly Asn Glu Ala Ser Thr Val Gln Glu Glu Glu Gln Asp Arg Lys Gly Ser His Thr Asp Leu Glu Ser Ile Asn Glu Asn Leu Val Glu Ser Ala Leu Arg Arg Val Asn Arg Glu 3.15 Glu Lys Gly Asn Lys Ser Val His Leu Arg Lys Ala Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val Pro Asn Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser Ser Leu Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser Lys Asn Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu Leu Asn Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr 4.35 Thr Ile Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser Glu Glu Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val Ile Leu Amp Pro Glu Arg Leu Glu Pro Gly Leu Amp Giu -430Glu Asp Thr Asp Phe Glu Glu Glu Asp Asp Asn Pro Asp Trp Val  $4 \le 5$ Ser Glu Leu Lys Lys Arg Ala Gly Trp Gln Gly Leu Cys Asp Arg 

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Gly Lys Ser Ser Cys Ser Arg Val Asp Glu Val Trp Pro Asn Leu
                 35
                                     40
Phe Ile Gly Asp Ala Met Asp Ser Leu Gln Lys Gln Asp Leu Arg
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                 50
Arg Pro Lys Ile His Gly Ala Val Gln Ala Ser Pro Tyr Gln Pro
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                                      70
Pro Thr Leu Ala Ser Leu Gin Arg Leu Leu Trp Val Arg Gln Ala
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                 8.0
Ala Thr Leu Asn His Ile Asp Glu Val Trp Pro Ser Leu Phe Leu
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                                     100
Gly Asp Ala Tyr Ala Ala Arg Asp Lys Sem Lys Leu Ile Gln Leu
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                                                         120
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Gly Ile Thr His Val Val Asn Ala Ala Ala Gly Lys Phe Gln Val
                1.25
                                    130
Asp Thr Gly Ala Lys Phe Tyr Arg Gly Met Ser Leu Glu Tyr Tyr
                140
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Gly Ile Glu Ala Asp Asp Asn Pro Phe Phe Asp Leu Ser Val Tyr
                155
                                     150
                                                         165
Phe Leu Pro Val Ala Arg Tyr Ile Arg Ala Ala Leu Ser Val Pro
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                170
Gln Gly Arg Val Leu Val His Cys Ala Met Gly Val Ser Arg Ser
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                                                         195
                135
Ala Thr Leu Val Leu Ala Phe Leu Met Ile Tyr Glu Asn Met Thr
                200
                                     205
                                                         210
Leu Val Glu Ala Ile Gln Thr Val Gln Ala His Arg Asn Ile Cys
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Pro Asn Ser Gly Phe Leu Arg Gln Leu Gln Val Leu Asp Asn Arg
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_				110					415			_	_	420
	_		Lys	425	-	-	-		430	_		_		435
Ile	Asp	Ser	Glu	Ile 440	Lys	Lys	Thr	Val	Val 445	Leu	Pro	Pro	Ile	Val 450
Ala	Ser	Arg	Gly	Gln 455	Ser	Glu	Glu	Pro	Ala 460	Gly	Lys	Thr	Lys	Ser 465
Met	Gln	Glu	Val		Ile	Lys	Thr	Leu		Glu	Ile	Lys	Leu	
Lys	Ala	Leu	Arg	Vā1	Gln	Gln	Ser	Ser	Glu	Ser	Ser	Thr	Ser	Ser
Pro	Ser	Gln	His		Ale	Thr	Pro	Gly		Arg	Arg	Leu	Leu	
т1.	mh »	T	Arg	500	C1	Mot	T	C1	505	Tira	7	T 011	Cln	510
				515					520					525
			Val	530					535					540
Glu	Ala	Ser	Gly	Glu 545	Thr	Thr	Gly	Val	Asp 550	Ile	Thr	Lys	Ile	Gln 555
Val	Lys	Arg	Cys	Glu 560	Thr	Met	Arg	Glu	Lys 565	His	Met	Gln	Lys	Gln 570
Gln	Glu	Arg	Glu	Lys 575	Ser	Val	Leu	Thr	Pro 530	Leu	Arg	Gly	Asp	Val 535
Ala	Ser	Cys	Asn	Thr 590	Gln	Val	Ala	Glu	Lys 595	Pro	Va1	Leu	Thr	Ala 600
Val	Pro	Gly	Ile		Arg	His	Leu	Thr		Arg	Leu	Pro	Thr	
Ser	Ser	Gln	Lys	Val	Glu	Val	Glu	Thr		Gly	Ile	Gly	Asp	
Leu	Leu	Asn	Val	_	Cys	Ala	Ala	Gln	Thr	Leu	Glu	Lys	Arg	Gly
Tare	лΊэ	Luc	Pro	635	1727	λcn	tra l	Lvc	640 Pro	Sor	1751	1/27	Lvc	545 Val
_		_		650				_	б55					550
			Pro	ธ์ธ์5				_	670	_				ъ́75
			Val	680					685					690
Val	Leu	Gln	Glu	Pro 695	Pro	Ala	Lys	Lys	Ala 700	Ala	Val	Ala	Val	Val 705
Pro	Leu	Val	Ser	Glu 710	Asp	Lys	Ser	Val	Thr 715	Val	Pro	Glu	Ala	Glu 720
Asn	Pro	Arg	Asp	Ser 725	Leu	Val	Leu	Pro	Pro 730	Thr	Gln	Ser	Ser	Ser 735
Asp	Ser	Ser	Pro	Pro 740	Glu	Val	Ser	G1y	Pro 745	Ser	Ser	Ser	Gln	Met 750
Ser	Met	Lys	Thr		Arg	Leu	Ser	Ser		Ser	Thr	Gly	Lys	
Pro	Leu	Ser	Val		Asp	Asp	Phe	Glu		Leu	Ile	Trp	Glu	
Ser	Gly	Gly	Lys	770 Leu 785	Glu	Ala	Glu	Ile		Leu	Asp	Pro	Gly	
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                 3,5
Ser Asn Lys Arg Thr Val Leu Thr Thr Gln Pro Asn Gly Leu Thr
                 5.0
                                     55
Thr Val Gly Lys Thr Gly Leu Pro Val Val Pro Glu Arg Gln Leu
                 65
                                     70
Asp Ser Ile His Arg Arg Gln Gly Ser Ser Thr Ser Leu Lys Ser
                 80
                                     85
Met Glu Gly Met Gly Lys Val Lys Ala Thr Pro Met Thr Pro Glu
                 95
                                    100
Gln Ala Met Lys Gln Tyr Met Gln Lys Leu Thr Ala Phe Glu His
                110
                                     115
His Glu Ile Phe Ser Tyr Pro Glu Ile Tyr Phe Leu Gly Leu Asn
                                     130
Ala Lys Lys Arg Gln Gly Met Thr Gly Gly Pro Asn Asn Gly Gly
                140
                                     145
Tyr Asp Asp Asp Gln Gly Ser Tyr Val Gln Val Pro His Asp His
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                                    160
Val Ala Tyr Arg Tyr Glu Val Leu Lys Val Ile Gly Lys Gly Ser
                170
                                    175
Phe Gly Cln Val Val Lys Ala Tyr Asp His Lys Val His Gln His
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                                    190
Val Ala Leu Lys Met Val Arg Asn Glu Lys Arg Phe His Arg Gln
                200
                                    205
                                                         210
Ala Ala Glu Glu Ile Arg Ile Leu Glu His Leu Arg Lys Gln Asp
                                    220
                                                         225
                215
Lys Asp Asn Thr Met Asn Val Ile His Met Leu Glu Asn Phe Thr
                230
                                    235
Phe Arq Asn His Ile Cys Met Thr Phe Glu Leu Leu Ser Met Asn
                245
                                    250
Leu Tyr Glu Leu Ile Lys Lys Asn Lys Phe Gln Gly Phe Ser Leu
                250
                                     265
Pro Leu Val Arg Lys Phe Ala His Ser Ile Leu Gln Cys Leu Asp
                275
Ala Leu His Lys Asn Arg Ile Ile His Cys Asp Leu Lys Pro Glu
                290
                                     295
Asn Ile Leu Lys Gln Gln Gly Arg Ser Gly Ile Lys Val Ile
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                                     310
Asp Phe Gly Ser Ser Cys Tyr Glu His Gln Arg Val Tyr Thr Tyr
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Ile Gln Ser Arg Phe Tyr Arg Ala Pro Glu Val Ile Leu Gly Ala
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                                     340
Arg Tyr Gly Met Pro Ile Asp Met Trp Ser Leu Gly Cys Ile Leu
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Ala Glu Leu Leu Thr Gly Tyr Pro Leu Leu Pro Gly Glu Asp Glu
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                                    370
Gly Asp Gln Leu Ala Cys Met Ile Glu Leu Leu Gly Met Pro Ser
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                380
Gln Lys Leu Leu Asp Ala Ser Lys Arg Ala Lys Asn Phe Val Ser
                395
                                    400
Ser Lys Gly Tyr Pro Arg Tyr Cys Thr Val Thr Thr Leu Ser Asp
                                    415
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Gly Ser Val Val Leu Asn Gly Gly Arg Ser Arg Arg Gly Lys Leu
                                    430
Arg Gly Pro Pro Glu Ser Arg Glu Trp Gly Asn Ala Leu Lys Gly
                440
                                    445
Cys Asp Asp Pro Leu Phe Leu Asp Phe Leu Lys Gln Cys Leu Glu
                455
                                    460
Trp Asp Pro Ala Val Arg Met Thr Pro Gly Gln Ala Leu Arg His
                470
                                    475
Pro Trp Leu Arg Arg Leu Pro Lys Pro Pro Thr Gly Glu Lys
                485
                                    490
                                                        495
Thr Ser Val Lys Arg Ile Thr Glu Ser Thr Gly Ala Ile Thr Ser
                500
                                    595
Ile Ser Lys Leu Pro Pro Pro Ser Ser Ala Ser Lys Leu Arg
                515
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Thr Asn Leu Ala Glr Met Thr Asp Ala Asn Gly Asn Ile Gln Gln
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Arg Thr Val Leu Pro Lys Leu Val Ser
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125
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Lys Ala Met Glu Ser Lys Lys Thr Tyr Glu Gln Lys Cys Arg Asp
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Ala Asp Asp Ala Glu Gln Ala Phe Glu Arg Ile Ser Ala Asn Gly
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His Gln Lys Gln Val Glu Lys Ser Gln Asn Lys Ala Arg Gln Cys
                170
                                    175
Lys Asp Ser Ala Thr Glu Ala Glu Arg Val Tyr Arg Gln Ser Ile
                                    190
                185
Ala Gln Leu Glu Lys Val Arg Ala Glu Trp Glu Gln Glu His Arg
                200
                                     205
Thr Thr Cys Glu Ala Phe Gln Leu Gln Glu Phe Asp Arg Leu Thr
                                    220
                215
Ile Leu Arg Asn Ala Leu Trp Val His Ser Asn Gln Leu Ser Met
                230
                                    235
Gln Cys Val Lys Asp Asp Glu Leu Tyr Glu Glu Val Arg Leu Thr
                                    250
                ...15
Leu Glu Gly Cys Ser Ile Asp Ala Asp Ile Asp Ser Phe Ile Gln
                250
                                     265
                                                         270
Ala Lys Ser Thr Gly Thr Glu Pro Pro Ala. Pro Val Pro Tyr Gln
                275
                                    ..30
                                                         235
Asn Tyr Tyr Asp Arg Glu Val Thr Pro Leu Thr Ser Ser Pro Gly
                290
                                    295
Ile Gln Pro Ser Cys Gly Met Ile Lys Arg Phe Ser Gly Leu Leu
                305
                                     310
His Gly Ser Pro Lys Thr Thr Ser Leu Ala Ala Ser Ala Ala Ser
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                                     325
Thr Glu Thr Leu Thr Pro Thr Pro Glu Arg Asn Glu Gly Val Tyr
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                                     3.40
                                                         345
Thr Ala Ile Ala Val Gln Glu Ile Gln Gly Asn Pro Ala Ser Pro
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Ala Gln Glu Tyr Arg Ala Leu Tyr Asp Tyr Thr Ala Gln Asn Pro
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                                    370
Asp Glu Leu Asp Leu Ser Ala Gly Asp Ile Leu Glu Val Ile Leu
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                                    335
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Glu Gly Glu Asp Gly Trp Trp Thr Val Glu Arg Asn Gly Gln Arg
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Gly Phe Val Pro Gly Ser Tyr Leu Glu Lys Leu
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Arg Arg Glu Thr Glu Leu Glu Asp Ala Arg Gln Lys Phe Arg Ser
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Val	Leu	Val	Glu	Ala 50	Thr	Val	Lys	Leu	Asp 55	Glu	Leu	Val	Lys	Lys 50
Ile	Gly	Lys	Ala	Val 55	Glu	Asp	Ser	Lys	Pro 70	Tyr	Trp	Glu	Ala	Arg 75
Arg	Val	Ala	Arg	Gln 30	Ala	Gln	Leu	Glu	Ala 85	Gln	Lys	Ala	Thr	Gln 30
Asp	Phe	Gln	Arg	Ala 95	Thr	Glu	Val	Leu	Arg 100	Ala	Ala	Lys	Glu	Thr 105
Ile	Ser	Leu	Ala	Glu 110	Gln	Arg	Leu	Leu	Glu 115	Asp	Asp	Lys	Arg	Gln 120
Phe	Asp	Ser	Ala	Trp 125	Gln	Glu	Met	Leu	Asn 130	His	Ala	Thr	Gln	Arg 135
Val	Met	Glu	Ala	Glu 140	Gln	Thr	Lys	Thr	Arg 145	Ser	Glu	Leu	Val	His 150
Lys	Glu	Thr	Ala	Ala 155	Arg	Tyr	Asn	Ala	Ala 160	Met	Gly	Arg	Met	Arg 165
Gln	Leu	Glu	Lys	Lys 170	Leu	Lys	Arg	Ala	Ile 175	Asn	Lys	Ser	Lys	Pro 130
-				135		-	-	-	190			Glu		195
				200					205			Leu		210
-		-		215			-		220			Ile		225
				230					235			Pro		240
	_		_	245		_			250			Glu		.355
			_	260			_		265			Ala		270
			_	275		_			280			Glu		235
				290					295			Pro		300
				305	_				310			Arg		315
				320					325			Phe		330
				335					340			Gly		345
				350					355			Glu		350
				365					370			Gly		375
				380					335			Ser		390
				395					400			Gln		405
				410	GIÀ	Arg	ASP	GΙΫ	11e 415	ше	Ala	Asp	шe	ьуs 420
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Val Gly Asn Gly Thr Tyr Gly Gln Val Tyr Lys Gly Arg His Val
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                                     40
Lys Thr Gly Gln Leu Ala Ala Ile Lys Val Met Asp Val Thr Glu
                                     5.5
Asp Glu Glu Glu Ile Lys Leu Glu Ils Asn Met Leu Lys Lys
Tyr Ser His His Arg Asn Ile Ala Thr Tyr Tyr Gly Ala Phe Ile
                 8.0
                                     35
Lys Lys Ser Pro Pro Gly His Asp Asp Gln Leu Trp Leu Val Met
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                                    100
Glu Phe Cys Gly Ala Gly Ser Ile Thr Asp Leu Val Lys Asn Thr
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                                    115
Lys Gly Asn Thr Leu Lys Glu Asp Trp I:e Ala Tyr Ile Ser Arg
                125
                                    130
Glu Ile Leu Arg Gly Leu Ala His Leu His Ile His His Val Ile
                140
                                    145
His Arg Asp Ile Lys Gly Gln Asn Val Lou Leu Thr Glu Asn Ala
                155
                                    160
Gly Val Lys Leu Val Asp Phe Gly Val Ser Ala Gln Leu Asp Arg
                170
                                    175
Thr Val Gly Arg Arg Asn Thr Phe Ile Gly Thr Pro Tyr Trp Met
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                                                         195
Ala Pro Glu Val Ile Ala Cys Asp Glu Asn Pro Asp Ala Thr Tyr
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                200
                                                         210
Asp Tyr Arg Ser Asp Leu Trp Ser Cys Gly Ile Thr Ala Ile Glu
                                    220
                215
Met Ala Glu Gly Ala Pro Pro Leu Cys Asp Met His Pro Met Arg
                230
                                    335
Ala Leu Phe Leu Ile Pro Arg Asn Pro Pro Pro Arg Leu Lys Ser
                245
                                    350
Lys Lys Trp Ser Lys Lys Phe Phe Ser Phe Ile Glu Gly Cys Leu
                260
                                     265
Val Lys Asn Tyr Met Gln Arg Pro Ser Thr Glu Gln Leu Leu Lys
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                                     230
His Pro Phe Ile Arg Asp Gln Pro Asn Glu Arg Gln Val Arg Ile
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                290
Gln Leu Lys Asp His Ile Asp Arg Thr Arg Lys Lys Arg Gly Glu
                                    310
Lys Asp Glu Thr Glu Tyr Glu Tyr Ser Gly Ser Glu Glu Glu Glu
                320
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Glu Glu Val Pro Glu Gln Glu Gly Glu Pro Ser Ser Ile Val Asn
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Val Pro Gly Glu Ser Thr Leu Arg Arg Asp Phe Leu Arg Leu Gln
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Gln	Glu	Asn	Lys	Glu 365	Arg	Ser	Glu	Ala	Leu 370	Arg	Arg	Gln	Gln	Leu 375
Leu	Gln	Glu	Gln	Gln 380	Leu	Arg	Glu	Gln	Glu 385	Glu	Tyr	Lys	Arg	Gln 390
Leu	Leu	Ala	Glu	Arg 395	Gln	Lys	Arg	Ile	$_{400}^{\rm Glu}$	Gln	Gln	Lys	Glu	Gln 405
Arg	Arg	Arg	Leu	Glu 410	Glu	Gln	Gln	Arg	Arg 415	Glu	Arg	Glu	Ala	Arg
Arg	Gln	Gln	Glu	Arg 425	Glu	Gln	Arg	Arg	Arg 430	Glu	Gln	Glu	Glu	Lys 435
Arg	Arg	Leu	Glu	Glu 440	Leu	Glu	Arç	Arg	Arg 445	Lys	Glu	Glu	Glu	Glu 450
Arg	Arg	Arg	Ala	Glu 455	Glu	Glu	Lys	Arg	Arg 460	Val	Glu	Arg	Glu	$_{465}^{\rm Gln}$
Glu	Tyr	Ile	Arg	Arg 470	Gln	Leu	Glu	Glu	Glu 475	Gln	Arg	His	Leu	Glu 480
Val	Leu	Gln	Gln	Gln 485	Leu	Leu	Gln	Glu	Gln 490	Ala	Met	Leu	Leu	His 495
Asp	His	Arg	Arg	Pro 500	His	Pro	Gln	His	Ser 505	Gln	Gln	Pro	Pro	Pro 510
Pro	Gln	Gln	Glu	Arg 515	Ser	Lys	Pro	Ser	Phe 530	His	Ala	Pro	Glu	Pro 525
Lys	Ala	His	Tyr	Glu 530	Fro	Ala	Asp	Arg	Ala 535	Arg	Glu	Val	Pro	Val 540
Arg	Thr	Thr	Ser	Arg 545	Ser	Pro	Val	Leu	Ser 550	Arg	Arg	Asp	Ser	Pro 555
Leu	Gln	Gly	Ser	Gly 560	Gln	Gln	Asn	Ser	Gln 565	Ala	Gly	Gln	Arg	Asn 570
Ser	Thr	Ser	Ile	Glu 575	Pro	Arg	Leu	Leu	Trp 530	Glu	Arg	Val	Glu	Lys 585
Leu	Val	Pro	Arg	Pro 590	Gly	Ser	Gly	Ser	Ser 595	Ser	Gly	Ser	Ser	Asn 600
Ser	Gly	Ser	Gln	Pro 605	Gly	Ser	His	Pro	Gly 510	Ser	Gln	Ser	Gly	Ser 515
Gly	Glu	Arg	Phe	Arg 620	Val	Arg	Ser	Ser	Ser 505	Lys	Ser	Glu	Gly	Ser 630
Pro	Ser	Gln	Arg	Leu 635	Glu	Asn	Ala	Val	Lys 640	Lys	Pro	Glu	Asp	Lys 645
Lys	Glu	Val	Phe	Arg 650	Pro	Leu	Lys	Pro	Ala 655	Asp	Leu	Thr	Ala	Leu 660
Ala	Lys	Glu	Leu	Arg 665	Ala	Val	Glu	Asp	Val 670	Arg	Pro	Pro	His	Lys 675
	Thr		_	680					635					690
	Glu	-	-	695					700		_			705
	Gly			710		_			715					720
	Gly			725					730				Asp	735
	Glu			7:10					745					750
	Val	_		755					750					755
Lys	Ser	Ser	Ser	Ser	Phe	Thr	Pro	Phe	Ile	Asp	Pro	Arg	Leu	Leu

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Gln	Ile	Ser	Pro	Ser 735	Ser	Gly	Thr	Thr		Thr	Ser	Val	Val	Gly 795
Phe	Ser	Cys	Asp	Gly 890	Met	Arg	Pro	Glu	Ala 805	Ile	Arg	Gln	Asp	Pro 810
Thr	Arg	Lys	Gly	Ser 815	Val	Val	Asn	Val	Asn 820	Pro	Thr	Asn	Thr	Arg 825
				Thr 830					835					840
				Leu 845					850					855
	_			Ser 860					865					870
				Pro 875					880					885
				Gly 890 Arg					895					900
-	7	-		905 Asp		_	_		910					915
				920 Leu					925					930
				935 Lys					940					9.15
Glu	Val	Tyr	Ala	950 Trp	Ala	51.0	Lys	Pro		His	Lys	Phe	Met	
Phe	Lys	Ser	Phe	965 C'.y	Glu	Leu	Va1	His		Ser	Cys	Ala	Gly	
His	Ala	Val	Asp	930 Val 995	Asp	Ser	Gly		935 Val 1000	Tyr	Asp	Ile		990 Leu 1005
Pro	Thr	His		Gln 1010	Cys	Ser	Ile	Lys		His	Ala	Ile	Ile	
Leu	Pro	Asn	Thr	Asp 1025	Gly	Met	Glu	Leu		Val	Cys	Tyr	Glu	
				Val 1040					1045					1050
				Gly 1055				,	1050					1055
				Met 1070					1075					1030
				Gly 1085					1090				-	1095
				Lys 1100				:	1105				:	1110
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Arg Arg Lys Glu Trp Val Arg Leu Val Arg Arg Lys Asn Phe Val
                 35
                                      40
Pro Gly Lys His Thr Phe Leu Cys Ser Lys His Phe Glu Ala Ser
                 5.0
                                      5,5
Cys Phe Asp Leu Thr Gly Gln Thr Arg Arg Leu Lys Met Asp Ala
                 65
                                      7.0
Val Pro Thr Ile Phe Asp Phe Cys Thr His Ile Lys Ser Met Lys
                                     8.5
                 8.0
Leu Lys Ser Arg Asn Leu Leu Lys Lys Asn Asn Ser Cys Ser Pro
                 95
                                     100
Ala Gly Pro Ser Asn Leu Lys Ser Asn ïle Ser Ser Gln Gln Val
                110
                                     11.5
Leu Leu Glu His Ser Tyr Ala Fhe Arg Asn Pro Met Glu Ala Lys
                125
                                     130
Lys Arg Ile Ile Lys Leu Glu Lys Glu Ile Ala Ser Leu Arg Arg
                140
                                     145
Lys Met Lys Thr Cys Leu Gln Lys Glu Arg Arg Ala Thr Arg Arg
                155
Trp Ile Lys Ala Thr Cys Leu Val Lys Asn Leu Glu Ala Asn Ser
                170
                                     175
                                                         180
Val Leu Pro Lys Gly Thr Ser Glu His Met Leu Pro Thr Ala Leu
                185
                                     190
                                                         195
Ser Ser Leu Pro Leu Glu Asp Phe Lys Ile Leu Glu Gln Asp Gln
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                                    205
Gln Asp Lys Thr Leu Leu Ser Leu Asn Leu Lys Gln Thr Lys Ser
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Thr Phe Ile
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Lou Tyr Glu Asp Ile Gly Lys Gly Ala Phe Ser Val Val Arg Arg
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Cys Val Lys Leu Cys Thr Gly His Glu Tyr Ala Ala Lys Ile Ile
                                      40
                 35
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Asn Thr Lys Lys Leu Ser Ala Arg Asp His Gln Lys Leu Glu Arg

				50					5.5					60
Glu	Ala	Arg	Ile	Cys 65	Arg	Leu	Leu	Lys	His	Ser	Asn	Ile	Val	Arg 75
Leu	His	Asp	Ser	Ile 80	Ser	Glu	Glu	Gly	Phe 35	His	Tyr	Leu	Val	Phe 90
Asp	Leu	Val	Thr	Gly 95	Gly	Glu	Leu	Phe	Glu 100	Asp	Ile	Val	Ala	Arg 105
Glu	Tyr	Tyr	Ser	Glu 110	Ala	Asp	Ala	Ser	His 115	Cys	Ile	Gln	Gln	Ile 120
Leu	Glu	Ala	Val	Leu 125	His	Cys	His	Gln	Met 130	Gly	Val	Val	His	Arg 135
Asp	Leu	Lys	Pro	Glu 140	Asn	Leu	Leu	Leu	Ala 145	Ser	Lys	Cys	Lys	Gly 150
Ala	Ala	Val	Lys	Leu 155	Ala	Asp	Phe	Gly	Leu 160	Ala	Ile	Glu	Val	Gln 165
Gly	Asp	Gln	Gln	Ala 170	Trp	Phe	Gly	Phe	Ala 175	Gly	Thr	Pro	Gly	Туг 180
Leu	Ser	Pro	Glu	Val 185	Leu	Arg	Lys	Glu	Ala 190	Tyr	Gly	Lys	Pro	Val 195
Asp	Ile	Trp	Ala	Суs 200	Gly	Val	Tle	Leu	Tyr 205	Ile	Leu	Leu	Val	Gly 210
Tyr	Pro	Pro	Phe	Trp 315	Asp	Glu	Asp	Gln	His 230	Lys	Leu	Tyr	Gln	Gln 225
Ile	Lys	Ala	Gly	Ala 230	Tyr	Asp	Phe	Pro	Ser	Pro	Glu	Trp	Asp	Thr
Val	Thr	Pro	Glu	Ala 345	Lys	Asn	Leu	Ile	Asn 150	Gln	Met	Leu	Thr	Ile 355
Asn	Pro	Ala	Lys	Arg 260	Ile	Thr	Ala	His	G1u 265	Ala	Leu	Lys	His	Pro 270
Trp	Val	Cys	Gln	Arg 275	Ser	Thr	Val	Ala	Ser 280	Met	Met	His	Arg	Gln 285
Glu	Thr	Val	Glu	Cys 290	Leu	Lys	Lys	Phe	Asn 295	Ala	Arg	Arg	Lys	Leu 300
Lys	Gly	Ala	Ile	Leu 305	Thr	Thr	Met	Leu	Ala 310	Thr	Arg	Asn	Phe	Ser 315
Ala	Ala	Lys	Ser	Leu 320	Leu	Asn	Lys	Lys	Ala 325	Asp	Gly	Va1	Lys	Pno 330
His	Thr	Asn	Ser	Thr 335	Lys	Asn	Ser	Ala	Ala 340	Ala	Thr	Ser	Pro	Lys 345
Gly	Thr	Leu	Pro	Pro 350	Ala	Ala	Leu	Glu	Ser 355	Ser	Asp	Ser	Ala	Asn 360
Thr	Thr	Ile	Glu	Asp 365	Glu	Asp	Ala	Lys	Ala 370	Arg	Lys	Gln	Glu	Ile 375
Ile	Lys	Thr	Thr	Glu 380	Gln	Leu	Ile	Glu	Ala 385	Val	Asn	Asn	Gly	Asp 390
Phe	Glu	Ala	Tyr	Ala 395	Lys	Ile	Cys	Asp	Pro 400	Gly	Leu	Thr	Ser	Phe 405
Glu	Pro	Glu	Ala	Leu 410	Gly	Asn	Leu	Val	Glu 415	Gly	Met	Asp	Phe	His 420
Arg	Phe	Tyr	Phe	Glu 425	Asn	Leu	Leu	Ala	Lys 430	Asn	Ser	Lys	Pro	Ile 435
His	Thr	Thr	Ile	Leu 440	Asn	Pro	His	Val	His 445	Val	Ile	Gly	Glu	Asp 450
Ala	Ala	Cys	Ile	Ala 455	Tyr	Ile	Arg	Leu	Thr 460	Gln	Туг	Ile	Asp	Gly 465
Gln	Gly	Arg	Pro	Arg	Thr	Ser	Gln	Ser	Glu	Glu	Thr	Arg	Val	Trp

260

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Gly Ala Pro Val Ala Pro Leu Gln
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Pro Glu Gly Thr Glu Pro Vai Arg Arg Glu Arg Thr Gln Pro Gly
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Leu Gly Pro Gly Arg Ala Arg Ala Met Ala Ala Glu Ala Thr Ala
                 35
Val Ala Gly Ser Gly Ala Val Gly Gly Cys Leu Ala Lys Asp Gly
                 50
Leu Gln Gln Ser Lys Cys Pro Asp Thr Thr Pro Lys Arg Arg Arg
                 ъ5
Ala Ser Ser Leu Ser Arg Asp Ala Glu Arg Arg Ala Tyr Gln Trp
                 30
                                     85
Cys Arg Glu Tyr Leu Gly Gly Ala Trp Arg Arg Val Gln Pro Glu
                 95
                                    100
Glu Leu Arg Val Tyr Pro Val Ser Gly Gly Leu Ser Asn Leu Leu
                                    115
                110
Phe Arg Cys Ser Leu Pro Asp His Leu Pro Ser Val Gly Glu Glu
                125
                                    130
                                                         135
Pro Arg Glu Val Leu Leu Arg Leu Tyr Gly Ala Ile Leu Gln Gly
                140
                                    1.15
Val Asp Ser Leu Val Leu Glu Ser Val Met Phe Ala Ile Leu Ala
                155
                                   150
Glu Arg Ser Leu Gly Pro Gln Leu Tyr Gly Val Phe Pro Glu Gly
                                    175
                170
Arg Leu Glu Gln Tyr Ile Pro Ser Arg Pro Leu Lys Thr Gln Glu
                135
                                    190
Leu Arg Glu Pro Val Leu Ser Ala Ala Ile Ala Thr Lys Met Ala
                                    205
Gln Phe His Gly Met Glu Met Pro Phe Thr Lys Glu Pro His Trp
                                                         225
                                    3.30
                215
Leu Phe Gly Thr Met Glv Arg Tyr Leu Lys Gln Ile Gln Asp Leu
                230
                                    .:35
Pro Pro Thr Gly Leu Pro Glu Met Asn Leu Leu Glu Met Tyr Ser
                245
                                    .:50
Leu Lys Asp Glu Met Gly Asn Leu Arg Lys Leu Leu Glu Ser Thr
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475

His Arg Arg Asp Gly Lys Trp Gln Asn Val His Phe His Cys Ser

355

Pro Ser Pro Val Val Phe Cys His Asn Asp Ile Gln Glu Gly Asn

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280
                275
Ile Leu Leu Ser Glu Pro Glu Asn λla Asp Ser Leu Met Leu
                290
                                    295
Val Asp Phe Glu Tyr Ser Ser Tyr Asn Tyr Arg Gly Phe Asp Ile
                                                        315
               395
                                   310
Gly Asn His Phe Cys Glu Trp Val Tyr Asp Tyr Thr His Glu Glu
                                   325
Trp Pro Phe Tyr Lys Ala Arg Pro Thr Asp Tyr Pro Thr Glu Glu
                3.35
                                    340
Gln Gln Leu His Phe Ile Arg His Tyr Leu Ala Glu Ala Lys Lys
                350
Gly Glu Thr Leu Ser Gln Glu Glu Gln Arg Lys Leu Glu Glu Asp
                365
                                    370
                                                        375
Leu Leu Val Glu Val Ser Arg Tyr Ala Leu Ala Ser His Phe Phe
                330
                                   335
Trp Gly Leu Trp Ser Ile Leu Gln Ala Ser Met Ser Thr Ile Glu
                                    400
                3 : 5
Phe Gly Tyr Leu Asp Tyr Ala Glr Ser Arg Phe Gln Phe Tyr Phe
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Gln Gln Lys Gly Gln Leu Thr Ser Val His Ser Ser Ser
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His His His Leu Pro His Leu Pro Pro Pro His Leu Leu His
                 35
                                    40
His His Pro Gln His His Leu His Pro Gly Ser Ala Ala Ala
                50
                                    55
Val His Pro Val Gln Gln His Thr Ser Ser Ala Ala Ala Ala Ala
                 65
                                    7.0
Ala Ala Ala Ala Ala Ala Ala Met Leu Asn Pro Gly Gln Gln
                 30
                                     35
Gln Pro Tyr Phe Pro Ser Pro Ala Pro Gly Gln Ala Pro Gly Pro
                 95
                                    100
Ala Ala Ala Pro Ala Gln Val Gln Ala Ala Ala Ala Tor
                                                        1.30
                110
                                    115
Val Lys Ala His His Gln His Ser His His Pro Gln Gln Gln
               125
                                   130
Leu Asp Ile Glu Pro Asp Arg Pro Ile Gly Tyr Gly Ala Phe Gly
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155

145

160

Val Val Trp Ser Val Thr Asp Pro Arg Asp Gly Lys Arg Val Ala

Leu Lys Lys Met Pro Asn Val Phe Gln Asn Leu Val Ser Cys Lys

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				170					175					100
7	***	Dl	7	170	T	T	Mat	T 0.11	175	Dho	Dho	T	uia	180
Arg	Val	Pne	Arg	185	ьеu	Lys	мес	Leu	190	rne	Pne	гур	пть	195
Δen	Val	T.=11	Ser		Len	Asn	Tle	t.eu		Pro	Pro	His	Tle	
ASII	vai	пеа	SCI	200	пец	лър	110	пса	205	110	110	111.5	110	210
ጥታት	Phe	Glu	Glu		Tur	Va1	Val	Thr		Leu	Met.	Gln	Ser	
111	1110	514	014	315	- 1 -	vai	val		220	200	1100	0111	202	J25
Leu	His	Lvs	Ile		Va1	Ser	Pro	Gln		Leu	Ser	Ser	Asp	
		- 1		330					235				-	240
Val	Lys	Val	Phe	Leu	Tyr	Gln	Ile	Leu	Arg	Gly	Leu	Lys	Tyr	Leu
				245					250					355
His	Ser	Ala	Cly	Ile	Leu	His	Αrç	Asp	Ile	Lys	Pro	Gly	Asn	Leu
				260					265					270
Leu	Val	Asn	Ser		Cys	Val	L∈u	Lys		Cys	Asp	Phe	Gly	
				375					380			_		385
Ala	Arg	Val	Glu		Leu	Asp	Glu	Ser		Hıs	Met	Thr	Gin	
*** 1	**- 1	m1	φ1	350	m	2	n 1 -	D	295	T1 -	T	M-+	C1	300
Vāl	Val	Thr	Gin	17/17 305	тут	Arg	Ата	Pro	310	тте	ьeu	мес	СТХ	315
Ara	His	Tur	Sor		λla	110	Acn	T10		Sar	Val	Glv	Cvs	
Arg	111.5	ıyı	Ser	320	ліц	110	rop.	110	325	DCI	vai	OTY	Cys	3.30
Phe	Ala	Glu	Leu		Glv	Ara	Ara	Ile		Phe	Gln	Ala	Gln	
1110	1114	51.4	200	335	011	.,_ 5	9		3.10					345
Pro	Ile	Gln	Gln	Leu	Asp	Leu	Ile	Thr	Asp	Leu	Leu	Gly	Thr	Pro
				350	_				355					360
Ser	Leu	Glu	Ala	Met	Arg	Thr	Ala	Cys	Gl.u	Gly	Ala	Lys	Ala	His
				365					370					375
Ile	Leu	Arg	Gly	Pro	His	Lys	Cln	Pro		Leu	Pro	Val	Leu	
				330					335					390
Thr	Leu	Ser	Ser		Ala	Thr	His	Glu		Val	His	Leu	Leu	
		<b>.</b>	TT - 7	395	<b>3</b>	D	G	T	400	T1 ~	C	7 7 -	T	405
Arg	Met	ьeu	vai	410	Asp	PIO	ser	ьуѕ	415	тте	ser	АТА	гур	430
Δla	Leu	ΔΊа	Hic		ייניי	Len	Asn	Glu		Ara	I.eu	Ara	Tyr	
AIG	пса	ma	111.5	4.15	1 7 1	БСи	пор	Olu	430	111 9	пса	111 9	+ 1 -	435
Thr	Cys	Met	Cvs		Cys	Cvs	Phe	Ser		Ser	Thr	Gly	Arq	
	- 4			440	.2	_			445			_	_	450
Tyr	Thr	Ser	Asp	Phe	Glu	Pro	Val	Thr	Asn	Pro	Lys	Phe	Asp	Asp
				455					450					455
Thr	Phe	Glu	Lys	Asn	Leu	Ser	Ser	Val	Arg	Gln	Val	Lys	Glu	lle
				470					475					430
Ile	His	Gln	Phe		Leu	Glu	Gln	Gln		Gly	Asn	Arg	Val	
_			_	435	~ 3				490	-		T)	<b>-</b> -	495
Leu	Cys	Пе	Asn		GIn	Ser	Ala	Ala		Lys	ser	rne	ше	
C.5~	Thr	77-7	ת T ה	500	Dro	Cor	C1v	Mot	505 Bro	Drc	So~	Dro	Lou	510
set	1111	vaı	Ald	515	FLO	aer	GIU	rie C	520	FIU	per	FIO	ьеu	525
Trn	Glu			دير					250					ريدر
111	- L U													

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<211> 322

<212> PRT

<213> Homo sapiens

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Ala Ser Pro Phe Met Gln Lys Leu Gly Phe Gly Thr Gly Val Asn
                 35
Val Tyr Leu Met Lys Arg Ser Pro Arg Gly Leu Ser His Ser Pro
                                      55
                 5.0
Trp Ala Val Lys Lys Ile Asn Prc Ile Cys Asn Asp His Tyr Arg
                 65
                                      70
Ser Val Tyr Gln Lys Arg Leu Met Asp Glu Ala Lys Ile Leu Lys
                                     85
                 8.0
Ser Leu His His Pro Asn Ile Val Gly Tyr Arg Ala Phe Thr Glu
                 95
                                     100
                                                         105
Ala Asn Asp Gly Ser Leu Cys Leu Ala Met Glu Tyr Gly Gly Glu
                                    115
                                                         120
                110
Lys Ser Leu Asn Asp Leu Ile Glu Glu Arg Tyr Lys Ala Ser Gln
                125
                                    130
Asp Pro Phe Pro Ala Ala Ile Ile Leu Lys Val Ala Leu Asn Met
                140
                                     145
Ala Arg Gly Leu Lys Tyr Leu His Gln Clu Lys Lys Leu Leu His
                                     150
                155
Gly Asp Ile Lys Ser Ser Asn Val Val Ile Lys Gly Asp Phe Glu
                170
                                     175
                                                         130
Thr Ile Lys Ile Cys Asp Val Gly Val Ser Leu Pro Leu Asp Glu
                185
                                    190
Asn Met Thr Val Thr Asp Pro Glu Ala Cys Tyr Ile Gly Thr Glu
                200
                                     205
Pro Trp Lys Pro Lys Glu Ala Val Glu Glu Asn Gly Val Ile Thr
                215
                                     220
                                                         225
Asp Lys Ala Asp Ile Phe Ala Phe Gly Leu Thr Leu Trp Glu Met
                230
                                     235
                                                         240
Mot Thr Leu Ser Ile Pro His Ile Asn Leu Ser Asn Asp Asp Asp
                245
                                    250
Asp Glu Asp Lys Thr Phe Asp Glu Ser Asp Phe Asp Asp Glu Ala
                260
                                    265
                                                         270
Tyr Tyr Ala Ala Leu Gly Thr Arg Pro Pro Ile Asn Met Glu Glu
                275
                                     230
Leu Asp Glu Ser Tyr Gln Lys Val Ile Glu Leu Phe Ser Val Cys
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                290
Thr Asn Glu Asp Pro Lys Asp Arg Pro Ser Ala Ala His Ile Val
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Glu Ala Leu Glu Thr Asp Val
                320
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<223> Incyte Clone Number: 2764911

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				395					100					405
Thr	Asn	Val	Ala	Arg 410	Ser	Ala	Met	Met	Lys 415	Asp	Ser	Pro	Phe	Tyr 420
Gln	His	Tyr	Asp	Leu 425	Asp	Leu	Lys	Asp	Lys 430	Pro	Leu	Gly	Glu	Gly 435
Ser	Phe	Ser	Ile	Cys 440	Arg	Lys	Cys	Val	His	Lys	Lys	Ser	Asn	Gln 450
Ala	Phe	Ala	Val	Lys 455	Ile	Ile	Ser	Lys	Arg 460	Met	Glu	Ala	Asn	Thr 465
Gln	Lys	Glu	Ile	Thr 470	Ala	Leu	Glu	Leu	Cys 475	Glu	Gly	His	Pro	Asn 480
Ile	Val	Lys	Leu	Hıs 435	Glu	Val	Phe	His	Asp 490	Gln	Leu	His	Thr	Phe 495
Leu	Val	Met	Glu	Leu 500	Leu	Asn	Gly	Gly	Glu 505	Leu	Phe	Glu	Arg	11e 510
Lys	Lys	Lys	Lys	His 515	Phe	Ser	Glu	Thr	Glu 520	Ala	Ser	Tyr	Ile	Met 525
Arg	Lys	Leu	Val	Ser 530	Ala	Val	Ser	His	M∍t 535	His	Asp	Val	Gly	Val 540
Val	His	Arg	Asp	Leu 545	Lys	Pro	Glu	Asn	Leu 550	Leu	Phe	Thr	Asp	Glu 555
				550					555				Ala	570
Leu	Lys	Pro	Pro	Asp 575	Asn	Gln	Pro	Leu	L;/s 580	Thr	Pro	Cys	Phe	Thr 585
Leu	His	Tyr	Ala	Ala 590	Prc	Glu	Leu	Leu	Asn 595	Gln	Asn	Gly	Tyr	Asp 500
Glu	Ser	Суѕ	Asp	Leu 605	Trp	Ser	Leu	Gly	Val 610	Ile	Leu	Tyr	Thr	Met 615
Leu	Ser	Gly	Gln	Val 620	Pro	Phe	Gln	Ser	His 625	Asp	Arg	Ser	Leu	Thr 630
Cys	Thr	Ser	Ala	Val 635	Glu	Ile	Met	Lys	Lys 640	Ile	Lys	Lys	Gly	Asp 645
Phe	Ser	Phe	Glu	Gly 650	Glu	Ala	Trp	Lys	Asn 655	Val	Ser	Gln	Glu	Ala 650
				665					670				Lys	675
				630					635				Asp	690
				695					700				Leu	705
				710					715				Phe	720
Ala	Phe	Asn	Lys	Tyr 725	Lys	Arg	Glu	Gly	Phe 730	Cys	Leu	Gln	Asn	Val 735
-	_			740		-	Arg	_	745		_			Ser 750
				755					760				His	Ser 765
				770			Lys		775					Leu 730
Gln	Pro	Ser	Asn	Pro 735	Ala	Asp	Ser	Asn	Asn 790	Pro	Glu	Thr	Leu	Phe 795
Gln	Phe	Ser	Asp	Ser 300	Val	Ala								

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<212> PRT
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<220>
<221> misc feature
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Leu Tyr Glu Asp Ile Gly Lys Gly Ala Phe Ser Val Val Arg Arg
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                                      2.5
Cys Val Lys Leu Cys Thr Gly His Glu Tyr Ala Ala Lys Ile Ile
                 35
                                     40
Asn Thr Lys Lys Leu Ser Ala Arg Asp His Gln Lys Leu Glu Arg
                 5,0
                                     55
Glu Ala Arg Ile Cys Arg Leu Leu Lys His Ser Asn Ile Val Arg
                 55
                                     70
Leu His Asp Ser Ile Ser Glu Glu Gly Phe His Tyr Leu Val Phe
                 80
                                     85
Asp Leu Val Thr Gly Gly Glu Leu Phe Glu Asp Ile Val Ala Arg
                 95
                                    100
Glu Tyr Tyr Ser Glu Ala Asp Ala Ser His Cys Ile Gln Gln Ile
                110
                                     115
Leu Glu Ala Val Leu His Cys His Gln Met Gly Val Val His Arg
                125
                                     130
Asp Leu Lys Pro Glu Asn Leu Leu Ala Ser Lys Cys Lys Gly
                140
                                     145
                                                         150
Ala Ala Val Lys Leu Ala Asp Phe Gly Leu Ala Ile Glu Val Gln
                155
                                     150
Gly Asp Gln Gln Ala Trp Phe Gly Phe Ala Gly Thr Pro Gly Tyr
                170
                                    175
Leu Ser Pro Glu Val Leu Arg Lys Glu Ala Tyr Gly Lys Pro Val
                                     190
                135
                                                         195
Asp Ile Trp Ala Cys Gly Val Ile Leu Tyr Ile Leu Leu Val Gly
                200
                                     205
                                                         210
Tyr Pro Pro Phe Trp Asp Glu Asp Gln His Lys Leu Tyr Gln Gln
                215
                                     220
                                                         225
I'e Lys Ala Gly Ala Tyr Asp Phe Pro Ser Pro Glu Trp Asp Thr
                230
                                    235
Val Thr Pro Glu Ala Lys Asn Leu Ile Asn Gln Met Leu Thr Ile
                245
                                     250
Asn Pro Ala Lys Arg Ile Thr Ala His Glu Ala Leu Lys His Pro
                                                         270
                260
                                     265
Trp Val Cys Gln Arg Ser Thr Val Ala Ser Met Met His Arg Gln
                275
                                     230
Glu Thr Val Glu Cys Leu Lys Lys Phe Asn Ala Arg Arg Lys Leu
                                    2.95
                                                         300
                290
Lys Gly Ala Ile Leu Thr Thr Met Leu Ala Thr Arg Asn Phe Ser
                3:15
                                    310
Ala Lys Ser Leu Leu Asn Lys Lys Ala Asp Gly Val Lys Pro Gln
                320
                                     325
                                                         330
Thr Asn Ser Thr Lys Asn Ser Ala Ala Ala Thr Ser Pro Lys Gly
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                                     340
                                                         3.45
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Thr Leu Pro Pro Ala Ala Leu Glu Pro Gln Thr Thr Val Ile His
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                                   355
Asn Pro Val Asp Gly Ile Lys Glu Ser Ser Asp Ser Ala Asn Thr
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                365
Thr Ile Glu Asp Glu Asp Ala Lys Ala Pro Arg Val Pro Asp Ile
                                    385
Leu Ser Ser Val Arg Arg Gly Ser Gly Ala Pro Glu Ala Glu Gly
                395
                                    400
Pro Leu Pro Cys Pro Ser Pro Ala Pro Phe Gly Pro Leu Pro Ala
                410
                                    415
Pro Ser Pro Arg Ile Ser Asp Ile Leu Asn Ser Val Arg Arg Gly
                425
                                    430
Ser Gly Thr Pro Glu Ala Glu Gly Pro Leu Ser Ala Gly Pro Pro
                440
                                    445
Pro Cys Leu Ser Pro Ala Leu Leu Gly Pro Leu Ser Ser Pro Ser
                455
                                    460
Pro Arg Ile Ser Asp Ile Leu Asn Ser Val Arg Arg Gly Ser Gly
                                    475
                470
Thr Pro Glu Ala Lys Gly Pro Ser Pro Val Gly Pro Pro Pro Cys
                                    490
                435
Pro Ser Pro Thr Ile Pro Gly Pro Leu Pro Thr Pro Ser Arg Lys
                                    505
Gln Glu Ile Ile Lys Thr Thr Glu Gln Leu Ile Glu Ala Val Asn
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                515
Asn Gly Asp Phe Glu Ala Tyr Ala Lys Ile Cys Asp Pro Gly Leu
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Thr Ser Phe Glu Pro Glu Ala Leu Gly Asn Leu Val Glu Gly Met
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Asp Phe His Arg Phe Tyr Phe Glu Asn Leu Leu Ala Lys Asn Ser
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Lys Pro Ile His Thr Thr Ile Leu Asn Pro His Val His Val Ile
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Gly Glu Asp Ala Ala Cys Ile Ala Tyr Ile Arg Leu Thr Gln Tyr
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Ile Asp Gly Gln Gly Arg Pro Arg Thr Ser Gln Ser Glu Glu Thr
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Arg	Leu	Asn	Met	Thr 65	Thr	Glu	Gln	Phe	Thr 70	Gly	Asp	His	Thr	Gln 75
His	Phe	Leu	Asp	Gly 80	Gly	Glu	Met	Lys	Уа1 85	Glu	Gln	Leu	Phe	Gln 90
Glu	Phe	Gly	Asn	Arg 95	Lys	Ser	Asn	Thr	Ile 100	G1n	Ser	Asp	Gly	Ile 105
Ser	Asp	Ser	Glu	Lys 110	Cys	Ser	Pro	Thr	Va1 115	Ser	Gln	Gly	Lys	Ser 120
Ser	Asp	Суѕ	Leu	Asn 125	Thr	Val	Lys	Ser	Asn 130	Ser	Ser	Ser	Lys	Ala 135
Pro	Lys	Val	Ve.1	Pro 140	Leu	Thr	Pro	Glu	Gln 145	Ala	Leu	Lys	Gln	Tyr 150
Lys	His	His	Leu	Thr 155	Ala	Tyr	Glu	Lys	Leu 160	Glu	Ile	Ile	Asn	Tyr 165
Pro	Glu	Ile	Tyr	Phe 170	Val	Gly	Pro	Asn	Ala 175	Lys	Lys	Arg	His	Gly 180
Val	Ile	Gly	Gly	Pro 185	Asn	Asn	Gly	Gly	Tyr 190	Asp	Asp	Ala	Asp	Gly 195
Ala	Tyr	Ile	His	Val 200	Pro	Arg	Asp	His	Leu 205	Ala	Tyr	Arg	Tyr	Glu 210
Val	Leu	Lys	Ile	11e 215	Gly	Lys	Gly	Ser	Phe 220	Gly	Gln	Val	Ala	Arg 225
Val	Tyr	Asp	His	Lys 230	Leu	Arg	Gln	Tyr	Val 335	Ala	Leu	Lys	Met	Val 240
Arg	Asn	Glu	Lys	Arg 245	Phe	His	Arg	Gln	Ala 250	Ala	Glu	Glu	Ile	Arg 255
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Val	Ile	His	Met	Leu 275	Glu	Ser	Phe	Thr	Phe 230	Arg	Asn	His	Val	Cys 235
Met	Ala	Phe	Glu	Leu 290	Leu	Ser	Ile	Asp	Leu 295	Tyr	Glu	Leu	Ile	Lys 300
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Ala	Gln	Ser	Ile	Leu 320	Gln	Ser	Leu	Asp	Ala 325	Leu	His	Lys	Asn	Lys 330
Ile	Ile	His	Cys	Asp 335	Leu	Lys	Pro	Glu	Asn 340	Ile	Leu	Leu	Lys	His 345
His	Gly	Arg	Ser	Ser 350	Thr	Lys	Val	Ile	Asp 355	Phe	Gly	Ser	Ser	Cys 360
Phe	Glu	Tyr	Gln	Lys 365	Leu	Tyr	Thr	Tyr	Ile 370	Gln	Ser	Arg	Phe	Туr 375
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Gln	Pro	Leu	Phe	Pro 410	Gly	Glu	Asp	Glu	Gly 415	Asp	Gln	Leu	Ala	Cys 420
Met	Met	Glu	Leu	Leu 425	Gly	Met	Pro	Pro	Pro 430	Lys	Leu	Leu	Glu	Gln 435
Ser	Lys	Arg	Ala	Lys 440	Tyr	Phe	Ile	Asn	Ser 445	Lys	Gly	Ile	Pro	Arg 450
Tyr	Cys	Ser	Val	Thr	Thr	G1n	Ala	Asp	Gly	Arg	Val	Val	Leu	Val

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Gly Gly Arg S	Ser Arg Arg 470	Gly Lys Lys	Arg Gly Pro	Pro Gly Ser 480
Lys Asp Trp G	Gly Thr Ala 485	Leu Lys Gly	Cys Asp Asp 490	Tyr Leu Phe 495
Ile Glu Phe L	Leu Lys Arg 500	Cys Leu His	Trp Asp Pro 505	Ser Ala Arg 510
Leu Thr Pro A	Ala Gln Ala 515	Leu Arg His	Pro Trp Ile 500	Ser Lys Ser 525
Val Pro Arg F	Pro Leu Thr 530	Thr Ile Asp	Lys Val Ser 535	Gly Lys Arg 540
Val Val Asn F	Pro Ala Ser 545	Ala Phe Gln	Gly Leu Gly 550	Ser Lys Leu 555
Pro Pro Val V	Val Gly Ile 560	Ala Asn Lys	Leu Lys Ala 565	Asn Leu Met 570
Ser Glu Thr A	Asn Gly Ser 575	Ile Pro Leu	Cys Ser Val 580	Leu Pro Lys 585
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Ser Asp Phe Gly Leu Ser Lys Met Glu Gly Lys Gly Asp Val Met
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Ser Thr Ala Cys Gly Thr Pro Gly Tyr Val Ala Pro Glu Val Leu
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Ala Gln Lys Pro Tyr Ser Lys Ala Val Asp Cys Trp Ser Ile Giy
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Val Ile Ala Tyr Ile Leu Leu Cys Gly Tyr Pro Pro Phe Tyr Asp
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                                    350
Glu Asn Asp Ser Lys Leu Phe Glu Gln Ile Leu Lys Ala Glu Tyr
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                                    265
                                                         270
Glu Phe Asp Ser Pro Tyr Trp Asp Asp Ile Ser Asp Ser Ala Lys
                275
                                    280
                                                         235
Asp Phe Ile Arg Asn Leu Met Glu Lys Asp Pro Asn Lys Arg Tyr
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                                    295
Thr Cys Glu Gln Ala Ala Arg His Pro Trp Ile Ala Gly Asp Thr
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Ala Leu Asn Lys Asn Ile His Glu Ser Val Ser Ala Gln Ile Arg
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Lys Asn Phe Ala Lys Ser Lys Trp Arg Gln Ala Phe Asn Ala Thr
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Ala Val Val Arg His Met Arg Lys Leu His Leu Gly Ser Ser Leu
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Ser Lys Glu Ser Gln Glu Thr Asn Trp Phe Ser Ala Pro Ser Ala
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Leu Arg Val Tyr Gly Gln Tyr Leu Asn Leu Asp Lys Asp His Asn
                170
                                    175
Gly Met Leu Ser Lys Glu Glu Leu Ser Arg Tyr Gly Thr Ala Thr
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                                    190
Met Thr Asn Val Phe Leu Asp Arg Val Phe Gln Glu Cys Leu Thr
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Tyr Asp Gly Glu Met Asp Tyr Lys Thr Tyr Leu Asp Phe Val Leu
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                                                         225
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Ala Leu Glu Asn Arg Lys Glu Pro Ala Ala Leu Gln Tyr Ile Phe
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                230
Lys Leu Leu Asp Ile Glu Asn Lys Gly Tyr Leu Asn Val Phe Ser
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                245
Leu Asn Tyr Phe Phe Arg Ala Ile Gln Glu Leu Met Lys Ile His
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Gly Gln Asp Pro Val Ser Phe Gln Asp Val Lys Asp Glu Ile Phe
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                                                         285
Asp Met Val Lys Pro Lys Asp Pro Leu Lys Ile Ser Leu Gln Asp
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                                    295
                                                         300
Leu Ile Asn Ser Asn Gln Gly Asp Thr Val Thr Thr Ile Leu Ile
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Gly Arg Ser Cys Ala Asn Pro Asn Val Gly Phe Gln Arg Gln Leu 125 130 Gln Glu Phe Glu Lys His Glu Val His Gln Tyr Arg Gln Trp Leu 140 145 Lys Glu Glu Tyr Gly Glu Ser Pro Leu Gln Asp Ala Glu Glu Ala 155 160 Lys Asn Ile Leu Ala Ala Pro Gly Ile Leu Lys Phe Trp Ala Phe 175 Leu Arg Arg Leu <210> 29 <211> 118 <212> PRT <213> Homo sapiens <220> <221> misc\_feature <223> Incyte Clone Number: 619292 <400> 29 Met Gly Leu Ile Asp Gly Met His Thr His Leu Gly Ala Pro Gly Leu Tyr Ile Gln Thr Leu Leu Pro Gly Ser Pro Ala Ala Ala Asp  $\mathbb{D}0$ Gly Arg Leu Ser Leu Gly Asp Arg Ile Leu Glu Val Asn Gly Ser ÷Û Ser Leu Leu Gly Leu Gly Tyr Leu Arg Ala Val Asp Leu Ile Arg 55 ъ̂ () 50 His Gly Gly Lys Lys Met Arg Phe Leu Val Ala Lys Ser Asp Val 70 Gly Lys Gln Pro Arg Arg Ser Ile Ser Ala Arg Pro Leu Ser Arg 3.0 85 Gly Ala Ala Arg Thr Pro Pro Gln Ala Arg His Pro Val Pro Pro 95 100 105 Gly Asp Thr Gly Lou Pro Pro Ala Phe Val Pro Val Leu 110 115 <210> 30 <211> 356 <212> PRT <213> Homo sapiens <220> <221> misc feature <223> Incyte Clone Number: 2054049 <400> 30 Met Val Gly Val Ser Gly Lys Arg Ser Lys Glu Asp Glu Lys Tyr 10 Leu Gln Ala Ile Met Asp Ser Asn Ala Gln Ser His Lys Ile Phe 25 110

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Lys Gly Gly Gly Tyr Glu Ser Glu Asp Ala Tyr Gln Asn Ala Glu

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Leu Arg Lys Leu Lys Glu Ile Val Tyr Pro Asn Ile Glu Glu Thr
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                                    85
His Trp Leu Ser Asn Leu Glu Ser Thr His Trp Leu Glu His Ile
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Lys Leu Ile Leu Ala Gly Ala Leu Arg Ile Ala Asp Lys Val Glu
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Ser Gly Lys Thr Ser Val Val Val His Cys Ser Asp Gly Trp Asp
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Arg Thr Ala Gln Leu Thr Ser Leu Ala Met Leu Met Leu Asp Gly
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                                    145
Tyr Tyr Arg Thr Ile Arg Gly Phe Glu Val Leu Val Glu Lys Glu
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Trp Leu Ser Phe Gly His Arg Phe Gln Leu Arg Val Gly His Gly
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Asp Lys Asn His Ala Asp Ala Asp Arg Ser Pro Val Phe Leu Gln
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                                    190
Phe Ile Asp Cys Val Trp Gln Met Thr Arg Gln Phe Pro Thr Ala
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Phe Glu Phe Asn Glu Tyr Phe Leu Tle Thr Ile Leu Asp His Leu
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Tyr Ser Cys Leu Phe Gly Thr Phe Leu Cys Asn Ser Glu Gln Gln
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Arg Gly Lys Glu Asn Leu Pro Lys Arg "hr Val Ser Leu Trp Ser
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Tyr Ile Asn Ser Gln Leu Glu Asp Phe Thr Asn Pro Leu Tyr Gly
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Ser Tyr Ser Asn His Val Leu Tyr Pro Val Ala Ser Met Arg His
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Leu Glu Leu Trp Val Gly Tyr Tyr Ile Arg Trp Asn Pro Arg Met
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Lys Pro Gln Glu Pro Ile His Asn Arg Tyr Lys Glu Leu Leu Ala
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Lys Arg Ala Glu Leu Gln Lys Lys Val Glu Glu Leu Gln Arg Glu
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Phe	Gln	Arg	Glu	Gln 55	Glu	Asn	Lys	Ser	Arg 70	Pro	His	Ser	Arg	Gly 75
Glu	Туг	Asn	Val	Туr 30	Ser	Thr	Phe	Gln	Ser 85	His	Glu	Pro	Glu	Phe 90
Asp	Туг	Leu	Lys	Ser 95	Leu	Glu	Ile	Glu	Glu 100	Lys	Ile	Asn	Lys	Ile 105
Arg	Trp	Leu	Pro	Gln 110	Gln	Asn	Ala	Ala	His 115	Phe	Leu	Leu	Ser	Thr 120
Asn	Asp	Lys	Thr	Ile 125	Lys	Leu	Trp	Lys	11e 130	Ser	Glu	Arg	Asp	Lys 135
Arg	Ala	Glu	Gly	Тут 140	Asn	Leu	Lys	Asp	Glu 145	Asp	Gly	Arg	Leu	Arg 150
Asp	Pro	Phe	Arg	Ile 155	Thr	Ala	Leu	Arg	Val 150	Pro	Ile	Leu	Lys	Pro 165
Met	Asp	Leu	Met	Val 170	Glu	Alə	Ser	Pro	Arg 175	Arg	Ile	Phe	Ala	Asn 130
Ala	His	Thr	Tyr	His 195	Ile	Asn	Ser	Il€	Ser 190	Val	Asn	Ser	Asp	His 195
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				245					350				Lys	255
				250	_		_		265				Asp	270
		_		275					280				Arg	285
				390					295				Phe	300
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				335					340				Glu	345
				350					355				Ser	360
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				380					385				Arg	390
		-		3 75				_	400	_			Cys	405
				410					415				Leu	420
		-	-	425					430				Asp	435
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